In the Claims:

1. (Currently Amended) An instrument for the analysis of a sample of volatile organic compounds ~~including~~ , said instrument comprising:

an evacuated chamber;

a downstream quadrupole mass filter and an upstream quadrupole mass filter housed within [[an]] said evacuated chamber; and

a curved flow tube having a first end and a second end, said tube connecting the upstream quadrupole mass filter to the downstream quadrupole mass filter.

2. (Currently Amended) The instrument ~~as claimed in~~ according to claim 1, ~~including~~ further comprising:

~~means~~ an apparatus associated with the chamber and connectable to an ion source ~~to direct~~ for directing ions from the ion source to the upstream quadrupole mass filter ~~to extract~~ , said upstream quadrupole mass filter extracting ions to create a precursor ion beam;

a lens ~~to focus~~ for focusing the ion beam and ~~to inject~~ for injecting the beam into [[a]] the first end of the curved flow tube;

~~means to enable~~ an apparatus for enabling a stream of non-reactive carrier gas to pass through the flow tube;

an injection ~~means~~ apparatus for injecting the sample of volatile compounds into the flow tube for reacting with the extracted ions; and

~~through which the sample of the volatile organic compounds may be injected and into the flow tube to react with the extracted ions;~~

~~means~~ a connection apparatus ~~to connect~~ for connecting the second end of the flow tube to the downstream quadrupole mass filter, ~~through which the said sample of~~

~~charged ions are directed to a detector device~~ and for directing the sample of charged ions to a detector device.

3. (Currently Amended) The instrument ~~as claimed in claim 1~~ according to claim 2, ~~including~~ further comprising an electrostatic shield located in the chamber ~~to shield~~ for shielding the downstream quadrupole mass filter and detector from the upstream quadrupole mass filter and source introduction.

4. (Currently Amended) The instrument ~~as claimed in claim 1~~ according to claim 2, wherein the non-reactive carrier gas is helium.

5. (Currently Amended) The instrument ~~as claimed in claim 1~~ according to claim 2, wherein the non-reactive gas comprises a mixture of helium and other non-reactive gases.

6. (Currently Amended) The instrument ~~as claimed in~~ according to claim 1, wherein the flow tube is pressurized at a higher pressure than ~~that~~ the pressure of the interior of the chamber.

7. (Currently Amended) The instrument ~~as claimed in~~ according to claim 1, wherein the flow tube acts as a drift tube and has a potential gradient applied to [it] said flow tube.

8. (Currently Amended) The instrument ~~as claimed in~~ according to claim 1, wherein the flow tube acts as a flow tube and has no potential gradient applied to [it] said flow tube.

9. (Currently Amended) The instrument ~~as claimed in claim 1~~ according to claim 2, wherein a vacuum pump is utilized to ensure the non-reactive carrier gas will pass through the flow tube.

10. (Currently Amended) The instrument ~~as claimed in claim 1~~ according to claim 2, ~~wherein~~ further comprising a venture orifice for effecting the injection of the non reactive gas into the flow tube ~~is effected through a venturi orifice~~.

11. (Currently Amended) The instrument ~~as claimed in~~ according to claim 10, wherein the curved flow tube and venturi orifice are constructed to provide a laminar flow of the gas-ion mixture through the flow tube.

12. (Currently Amended) An instrument for the analysis of volatile organic compounds, said instrument ~~including~~ comprising:

an evacuated chamber;

a downstream quadrupole mass filter and a detector, and an upstream quadrupole mass filter and a source introduction, housed within [an] said evacuated chamber;

an electrostatic screen for dividing the interior of said chamber ~~being divided~~ into sections ~~by an electrostatic screen~~ to shield the downstream quadrupole mass filter and the detector from the upstream quadrupole mass filter and source introduction; and

a flow tube comprising a straight tube and two bends connecting the upstream quadrupole mass filter to the downstream quadrupole mass filter.

13. (Currently Amended) The instrument ~~as claimed in~~ according to claim 1, ~~wherein~~ further comprising a pumping system for evacuating the interior of the chamber ~~is evacuated by a pumping system that will maintain~~ for maintaining the internal elements within appropriate operating margins.